INNOVATIVE TECHNOLOGY GUIDANCE DOCUMENT

COM - 95.001

This Guidance Document lays the groundwork for DEP to foster the introduction of new environmental technology. Innovative environmental technologies are important for many reasons. Primary among these are their potential ability to meet or exceed the Department's goals more effectively and at lower cost, and to expedite the resolution of high-risk, high-priority threats to the environment and human health.

This Guidance Document represents an important step in the Department's commitment to innovative environmental technologies. It represents both an end and a beginning: the culmination of efforts over the past two years of many Department staff to define the process for DEP's commitment to innovation and a signal of the Department's intention to further its use of innovative technologies.

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David B. Struhs, Commissioner Date

Innovative Technology Guidance Document

 # COM - 95.001

October 1995

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DEP INNOVATIVE TECHNOLOGY GUIDANCE DOCUMENT INTRODUCTION

This guidance document is based on the collective experience of the Department's Innovative Technology Workgroup which began meeting in 1993. An earlier draft document was discussed at training seminars and at a Senior Staff meeting in November/ December 1994. Comments from these sessions have been incorporated into the final document.

GOALS OF THE INNOVATIVE TECHNOLOGY (IT) GUIDANCE DOCUMENT

1. Identify IT projects early in order to facilitate and allow adequate time for their review.

2. Insure that proposals which are not innovative will proceed through the normal permitting process.

3. Insure clear communication about IT projects among DEP staff and offices and between DEP and the public.

4. Establish protocols for consistent review and evaluation of IT projects, while recognizing the special needs of IT proponents.

5. Establish process for setting up a review team and assigning review responsibilities.

DEFINITION OF INNOVATIVE TECHNOLOGIES

A general definition of an innovative environmental technology is a new technology or process designed to solve environmental problems. It can also be the application of a proven technology in one field of application to a new or different environmental problem or the use of a technology that is new to DEP.

More specifically, the DEP uses the following EPA definition[1]:

> any system of pollution prevention, control or site assessment and remediation methods, processes or technologies that:
> (1) has not been adequately demonstrated in practice, and

[1] adopted from the U.S. EPA definition of innovative control technology in 40 CFR 52.21 (b) (19).

(2) would have a substantial likelihood of achieving greater continuous environmental protection than other technologies in current practice or at least comparable results at lower cost in terms of energy, economics, or environmental impacts.

PHILOSOPHY OF DEP INNOVATIVE TECHNOLOGY REVIEW SYSTEM

DEP encourages the development of innovative environmental technology for many reasons:

- Innovative technologies which are cleaner, less costly, and more effective further the Department's fundamental mission of environmental protection.
- Innovative technologies offer potential for expedited resolution of high priority concerns - those which present high risks to the environment and human health.
- IT addresses one of DEP's core values.
- DEP is already familiar with many innovative technologies through our existing regulations and review systems.
- Development of innovative environmental technology is a priority for the Commonwealth, and DEP has an obligation under the Massachusetts Strategic Envirotechnology Partnership (STEP)[2] to streamline our process for reviewing innovative technologies.

DEP'S APPROACH TO INNOVATIVE TECHNOLOGIES

The Department's approach to IT is based on the following

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[2] The Massachusetts Strategic Envirotechnology Partnership (STEP) is a consortium of state agencies and organizations: Environmental Affairs, Economic Affairs, Energy Resources, and the UMass system. Its goal is to coordinate existing public services and state resources to help move innovative environmental technologies along the road to commercial viability. STEP services include business planning, technology assessment by Technical Review Panels, and research and testing at UMass facilities. STEP also provides opportunities to demonstrate new technologies at state facilities and referrals to state agencies which are potential purchasers. As a STEP partner, DEP provides to STEP technologies the expedited review process described in this Guidance Document.

To answer questions or get more information about the STEP program and its relationship to DEP's Innovative Technology process, contact the Department's IT Coordinator in the Commissioner's Office or the STEP Coordinator at the Executive Office of Environmental Affairs.

considerations:

- **Ë Equal or better environmental protection:** IT will not be used to weaken substantive standards or promote particular products or companies.

- **Ë Clear communication:** essential to ensure common understanding among all players in the Commonwealth's innovative technology field: IT proponents, DEP staff, and STEP agencies.

- **Ë Reducing uncertainty:** By their very nature, innovative technologies are uncertain: performance data may be lacking, uncertainties exist about the technology itself, markets are unproven, companies need to work fast to get into the market, and they may experience start-up problems. DEP will deal with those uncertainties in several ways:
  1. Collect the right kind and amount of data to make judgments about performance;
  2. Allow for data to be gathered without compromising environmental protection;
  3. Work with IT developers to encourage creative technical and procedural problem-solving to reduce barriers to innovation.

- **Ë Technological risks:** DEP's role is not to predict which IT will work, but to set up a framework within which the technology can be proven or disproved. This framework also allows the consequences of a failure of the technology to be understood and accepted by all parties as comparatively small. If data is uncertain, DEP can take larger risks when the consequences of failure are smaller.

- **Ë Available tools:** Many tools are already available within DEP to encourage innovative technologies:
  1. Permits or approvals for piloting or demonstration purposes, with limits on project scale, operating conditions, time period, etc.

  2. Careful attention to the siting and public acceptability of pilot sites to minimize public risks.

  3. Alternative Schedule Project agreements that allow parties to understand and agree in advance on all the steps in a full review process.

4. Review based on performance standards rather than a detailed review of each step of a project and component of a technology.

, **Additional tools** discussed in this guidance document are:

1. Review protocols for IT proposals.
2. Process for establishing IT review teams.
3. Resources of the Commonwealth's STEP program.
4. IT Clearinghouse and Network of Regional, Bureau, and Department IT Coordinators.

DEP INNOVATIVE TECHNOLOGY GUIDANCE DOCUMENT
SECTION ONE: REVIEW PROTOCOLS

INTRODUCTION

There is a great variety in the types of innovative technologies coming to the Department and their development status. There are also differences in how DEP programs review ITs, with some programs encouraging or even demanding use of the best available technology and others based on meeting current standards.

Standard applications have a clear permit pathway at DEP. IT proposals often cannot follow the normal process, particularly if permit categories do not exist for a new technology or if the existing data is insufficient to support a technical review. To deal with these uncertainties, the DEP review protocols serve two purposes:

- Insure timely, logical communication among all parties involved with IT, including various DEP offices, IT proponents, the STEP program, and the public.

- Clarify and make consistent between DEP programs the expectations which need to be satisfied in order for the Department to grant an approval to proceed with an IT project.[3]

IT review protocols do not dictate the number of meetings in the review process, specify detailed data requirements, or mandate a special review team. Instead, they specify the information to be gathered and decisions to be made at each step of the review, while allowing for successive levels of detail and understanding among all parties. Some IT proposals will be reviewed by only

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[3] Two DEP programs involving innovative technologies operate somewhat outside the framework established by the IT Guidance Document. Cleanup of most hazardous waste sites is done without direct DEP oversight. Instead, the Massachusetts Contingency Plan (MCP) sets performance standards to be achieved, but use of an innovative assessment or remediation technology is left to the party responsible for the site and the professionals hired to manage the cleanup. Reports on cleanup sites do ask if the technologies used at the site are innovative. Cleanup of publicly-funded sites offers more opportunity for DEP to demonstrate innovative technologies.

The new Title 5 provisions governing on-site sewage disposal systems include provisions for review by DEP of innovative disposal technologies. A special group within the Division of Water Pollution Control operates this program.

one person and combine steps because they are relatively simple and well-developed, while others may require a special review team and multiple iterations within a step to ensure complete understanding between the parties.

The IT review protocols described below cover four basic steps:

I: Initial Contact and Screening
II: Preliminary Scoping Session
III: Data Assessment and Negotiation
IV: Authorization to Proceed

Attachment One (pages 13-16) at the end of this section is a flow diagram of the review protocols for innovative technologies.

STEP I: INITIAL CONTACT AND SCREENING

GOALS

- Introduce the proponent to DEP's approach to IT reviews.
- Gather information needed by DEP to decide on specific review approaches.
- Prepare for a productive scoping session as soon as possible after receiving the IT proposal.
- Identify concerns and questions of IT proponent.
- Facilitate communication with STEP program if appropriate.

PROCESS

Because IT proposals will come to the regions through direct contact to DEP from a proponent or through the STEP program, Step I of the DEP IT protocol has two pathways. Steps II through IV are the same regardless of the initial source of the IT proposal.

DEP PATHWAY:

A. IT proponent contacts regional or Boston office:

1. Part of regular application
2. Telephone call or meeting with reviewer, Regional or Department ITC, service center, or other staff.

B. DEP contact notifies Regional or Boston ITC for joint screening of request:

1. Is it innovative?
   - NO: Refer to regular permitting process.
   - YES: Explain IT permitting process.
     Send DEP IT Questionnaire (Attachment Three).
     Notify IT Network.[4]
2. Is it a Massachusetts company? (Headquarters, licensing, or joint efforts) AND
3. Likely to need help with business planning, testing or demonstration?
   - NO: No referral to STEP.
   - YES: Give STEP contacts: Department ITC or STEP Coordinator.
     Offer to send STEP brochure and forms.
     Notify IT Network.

[4] The IT Network includes Innovative Technology Coordinators (Regions, Bureaus, and Department) and Technical Experts listed in Attachment Two. The Regional and Department ITCs should be kept informed of all IT proposals, as well as the appropriate Bureau ITC and Technical Experts.

C. IT proponent submits IT Questionnaire to Regional ITC.

STEP PATHWAY:
A. Department ITC receives referral from STEP.

B. Lateral review initiated to identify DEP's preliminary technical observations, environmental concerns, and regulatory issues for consideration by STEP during its review process:
1. Department ITC notifies Bureau and/or Regional ITCs and distributes information to DEP Technical Experts (listed in Attachment Two, page 18).
2. Bureau/Region ITCs and Technical Experts give feedback on information; Department ITC passes on to STEP.
3. Project continues in STEP?
NO: Closure; Department ITC notifies IT Network. Project may still come to DEP via IT or normal permitting process.
YES: Request received for demonstration or permitting: Department ITC notifies Regional ITC if project has regional focus.

C. Department ITC relays STEP Panel recommendation to IT Network.

FROM THIS POINT THE PROTOCOL FOR HANDLING AN INNOVATIVE TECHNOLOGY PROPOSAL IS THE SAME REGARDLESS OF ITS SOURCE.

D. Proposal meets Criteria for Special Review Team? (See Section Two, page 25.)
NO: Reviewer takes lead on application.
YES: Review Team and Team Lead established.

E. Team Lead or Reviewer responds to IT Questionnaire or STEP referral:
1. Notifies IT Network.
2. Schedules preliminary scoping session as soon as possible. Regional Service Centers can help send out information and schedule meetings.
3. Distributes IT Questionnaire as needed.
4. Develops agenda for scoping session.

STEP II: PRELIMINARY SCOPING SESSION

GOALS

- DEP understands the technology, the proponent, the project's needs and data available, in order to decide an appropriate permitting strategy.
- Proponent meets DEP reviewers and hears initial guidance on review process.
- Both parties understand the other's concerns and limitations.
- Missing information is identified and next steps and timeframe for action are established.

PROCESS

The scoping session is structured as a review of the IT Questionnaire. DEP staff ask questions about information that is unclear or incomplete, and the proponent provides additional data and information. Minutes are kept and distributed to all participants.

A. Information Presented by the Proponent (based on IT Questionnaire or STEP forms):

1. Technical Description
   * Overview of technology.
   * Comparison to existing technology: capital equipment and O&M cost, speed, effectiveness, position in pollution prevention hierarchy (prevention, recycling, treatment, or disposal).
   * Inputs to process.
   * Waste products and efforts to reduce waste.

2. Potential Project Impact
   * Impact to all environmental media (soil, groundwater, surface water, air) and proposed controls.
   * Materials handling and mass balance.
   * Proposed site with potential human or environmental sensitive receptors identified; if site is unknown, proponent's siting criteria.
   * Desired scale of project: bench, field demonstration/pilot[5], or full scale.

3. Information about Proponent and Proponent's Needs
   * Qualifications of operators.
   * Time constraints and desired time to complete permit.
   * Financial constraints.
   * Proprietary information, if relevant.

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[5] A pilot project should prove its reliability under worst case situations and consider seasonal variation. For these reasons, it is presumed that a pilot should be conducted for at least one year unless O&M aspects do not vary with the seasons or conditions exist to require a longer time for evaluation.

4. Technology Performance Data
   * Results from projects operated under similar conditions, including data on quality assurance and control.[6]
   * Problems with operation or maintenance of technology and corrective measures taken.
   * Reliability under variety of operating conditions.
   * Peer journal reviews.
   * Relevant state or federal approvals or denials.

B. Preliminary Information DEP Provides to Proponent at Scoping Session or Shortly Afterwards:

1. Degree of innovation. If the proposal is not an IT, it is referred to the regular permitting process.
2. Use of STEP resources: if sufficient data for any scale of project is not available, or if the proposal appears not to have a business plan, a referral to STEP is appropriate.
3. Additional information needed by DEP to respond to proponent's request.
4. Permits needed, siting requirements, and MEPA applicability.
5. Public involvement required or recommended.
6. Appropriate scale for project.[7]
7. Standard permit timelines versus the use of Alternative Schedule Process.
8. Name of DEP contact and IT Review Team members (if relevant).
9. Guidelines for submitting trade secret information to DEP, if relevant.
10. Next steps, who is to take them, and timeframe for action.

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[6] The Department will accept statistically similar data from projects operated under situations in other states that can be documented. This data could substitute for piloting the technology in Massachusetts by changing the scale of the project; for example, if a bench scale project has been approved elsewhere and is meeting the same or similar standards DEP would impose, then a field demonstration or pilot may be acceptable here. DEP will also explore with other states those technologies which they have investigated to determine if relevant information can be used to accelerate permitting the technology in Massachusetts. DEP prefers third-party validated data if available.

[7] Bench scale = laboratory work; field demonstration or pilot = less than full scale operations in actual field conditions; full scale = 100% of intended operations.

STEP III: DATA ASSESSMENT AND NEGOTIATION

GOALS

- Assess data available on the proposal and request any additional information needed.
- Agree conceptually on how DEP will evaluate the project: type of approval and scale of project.
- Outline the contents of an application and review process.
- Discuss public involvement.
- Agree on review schedule and fee.
- Outline potential outcomes of review.

PROCESS

A. DEP Reviewer or Review Team Evaluates Information Provided and Determines Essential Elements of a Permit:

Choosing a permit pathway early in the process ensures that the proponent invests dollars and time wisely and that the appropriate authorizations are issued by the DEP. Gathering the data to make these decisions, and establishing the trust between parties necessary to work cooperatively towards a common goal, is essential to the success of this protocol. Three sets of questions will guide the decision on the appropriate permit pathway for an innovative technology:

1. Is the technology proven or unproven? How much technology performance data exists? Is it based on field test or in-house performance?
2. What are the environmental risks if the technology fails? What type of controls are needed? What additional data are needed to understand the potential environmental impacts of failure? What scale of project is needed and how does the scale affect environmental risk?
3. Does the technology have a substantial likelihood of achieving environmental results comparable to or better than existing technologies?

B. Based on Answers to these Questions, DEP Staff Provide the Following Information to the Proponent:

1. Assessment of goal for IT proposal:
   * General criteria for success or failure of the technology.
   * DEP decision on scale of project.
   * Environmental standards which must be met: air toxins, soil contamination limits, water quality criteria.

2. Contingency Conditions:
   * Monitoring and reporting mechanisms for possible failure of demonstration.
   * Contingency plans for backup operations, shut-down, or limited operations.

3. Overall Risk Rating:
   * Reliability of technology and environmental and public health risk.
   * Comparative environmental standards that minimize risk: drinking water quality, wastewater discharges, air quality.
   * Applicability of DEP standard risk assessment measures.
   * Known risk management techniques to bring risks within acceptable limits.
   * Assessment of project scale based on overall risk.

4. Form of approval based on scale of project: conditional authorization to proceed, memorandum of understanding, consent order, permit, etc.

5. Additional discussion of public involvement requirements or needs.

6. Draft agreement on fee and schedule (ASP or other).

C. Meeting with Proponent to Discuss DEP Evaluation:
   1. DEP's written evaluation may be mailed to proponent in advance or presented at the meeting.
   2. Notes are taken on areas of agreement and disagreement and distributed to participants.
   3. Requirements for additional information may be made.

Step III is repeated until all questions are answered and concerns are resolved, so that the proponent is ready to submit formal application for authorization to proceed.

STEP IV: AUTHORIZATION TO PROCEED

GOALS

- Detail criteria for success/failure of demonstration.
- Finalize alternative schedule, if applicable, and fee.
- Develop appropriate language for DEP approval or denial.
- Finalize appropriate scale for the demonstration.

The recommended authorization document for a demonstration is a Conditional Authorization to Proceed, which can be part of a standard permit, an Alternative Schedule Project agreement, or a consent order. The Authorization to Proceed should include specific performance criteria, environmental standards, and schedule for the following:

A. Construction.

B. Operation.

C. Monitoring of Process Upsets or Malfunctions:
   1. Process and trigger points used to identify process upsets or malfunctions.
   2. Reporting requirements.
   3. Operating options:
      * Continued operations.
      * Modified operations.
      * Halt in operations with closeout procedures.

D. Testing and Performance Evaluation:
   1. Criteria for success.
   2. Interim report (schedule and contents).
   3. Final report.

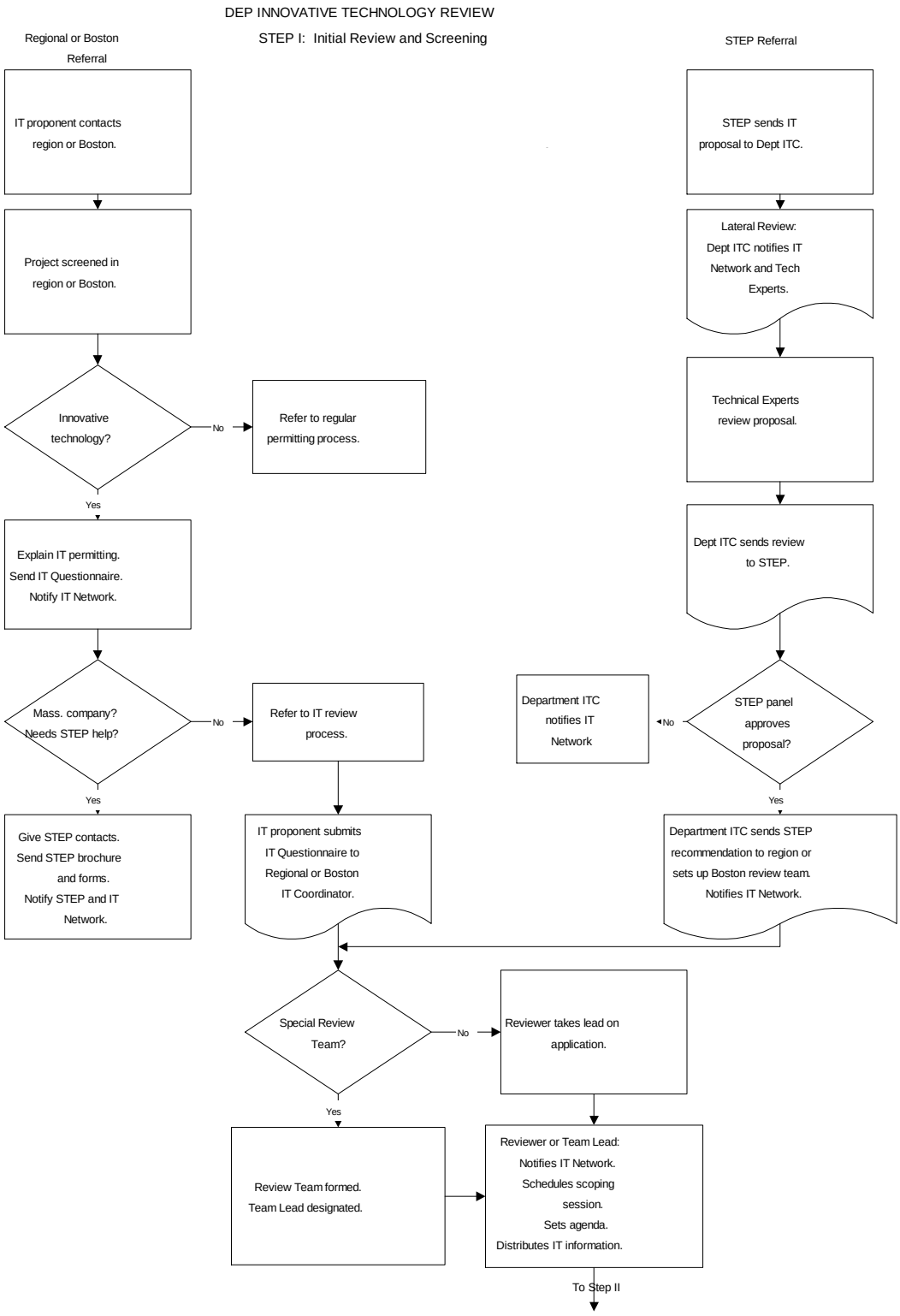
E. DEP Determination of Success and Final Report:
   1. Final approval.
   2. Modified final approval.
   3. Disapproval.

F. Relationship to Normal Permitting Process: Requirements for scaling up to full operations.

SECTION ONE, ATTACHMENT ONE
FLOW DIAGRAMS OF REVIEW PROTOCOLS

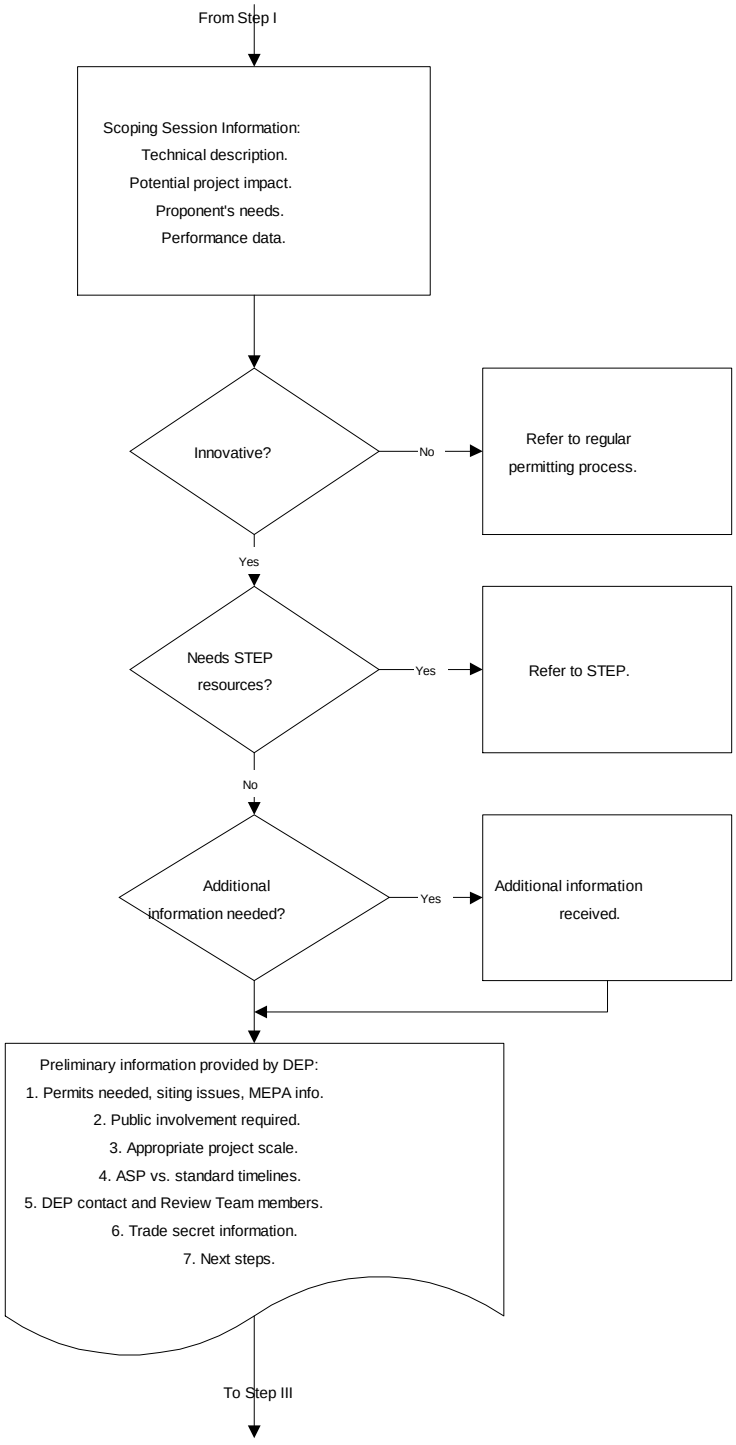
The flow diagrams on pages 14-16 can be viewed on the computer screen by using the View Document option under Print options (Shift F7, Option 6). They can also be printed, although this make take considerable time on older printers and does not produce high-quality output.

The Department IT Coordinator will send printed copies of the flow charts to all members of the IT Network; please call if you are not part of the Network and would like copies.

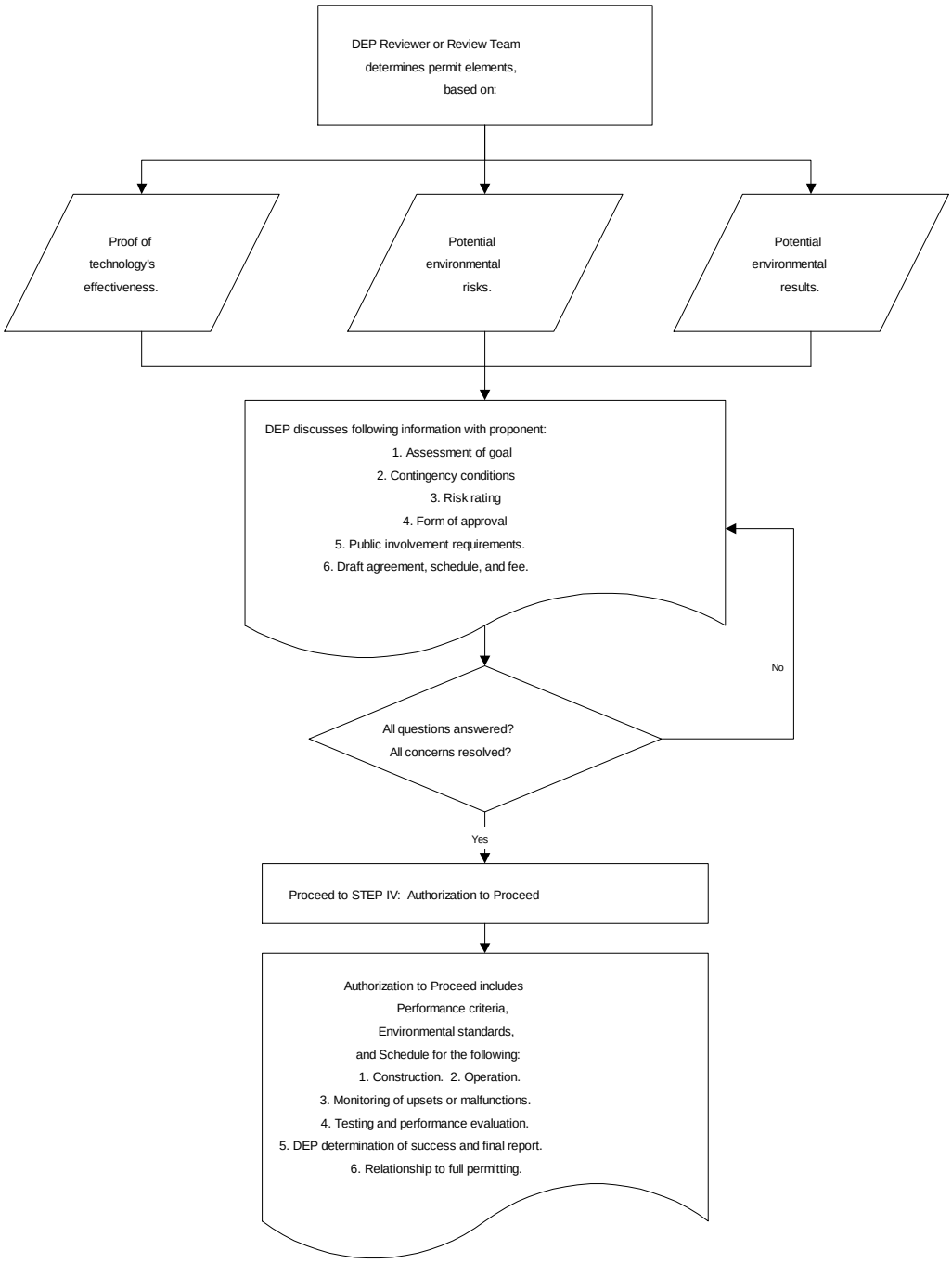

DEP INNOVATIVE TECHNOLOGY REVIEW
STEP I: Initial Review and Screening
Regional or Boston Referral
STEP Referral
IT proponent contacts region or Boston.
Project screened in region or Boston.
Innovative technology?
No
Refer to regular permitting process.
Yes
Explain IT permitting. Send IT Questionnaire. Notify IT Network.
Mass. company? Needs STEP help?
No
Refer to IT review process.
Yes
Give STEP contacts. Send STEP brochure and forms. Notify STEP and IT Network.
IT proponent submits IT Questionnaire to Regional or Boston IT Coordinator.
STEP sends IT proposal to Dept ITC.
Lateral Review: Dept ITC notifies IT Network and Tech Experts.
Technical Experts review proposal.
Dept ITC sends review to STEP.
STEP panel approves proposal?
No
Department ITC notifies IT Network
Yes
Department ITC sends STEP recommendation to region or sets up Boston review team. Notifies IT Network.
Special Review Team?
No
Reviewer takes lead on application.
Yes
Review Team formed. Team Lead designated.
Reviewer or Team Lead: Notifies IT Network. Schedules scoping session. Sets agenda. Distributes IT information.
To Step II

DEP INNOVATIVE TECHNOLOGY REVIEW

STEP II: Preliminary Scoping Session



DEP INNOVATIVE TECHNOLOGY REVIEW
STEP III: Data Assessment and Negotiation
and
STEP IV: Authorization to Proceed



SECTION ONE, ATTACHMENT TWO
DEP INNOVATIVE TECHNOLOGY WORKGROUP AND TECHNICAL EXPERTS

INNOVATIVE TECHNOLOGY WORKGROUP
Claire Barker DEP IT Coordinator

Linda Benevides	Director, Office of Innovative Technology and Green Business
John Felix David Shakespeare Ed Braczyk	Northeast Regional Office
Mark Jablonski	Southeast Regional Office
Anna Symington	Western Regional Office
John Regan	Central Regional Office
Robert Cady Russell Isaac	Bureau of Resource Protection, Boston
Vacant	Bureau of Waste Site Cleanup, Boston
Robert Donaldson	Bureau of Waste Prevention, Boston
Alissa Whiteman	Office of General Counsel, Boston

As of January 1998. Lists are updated annually in July.

DEP TECHNICAL EXPERTS

IT Coordinators are able to call on the technical expertise of DEP staff in all regions and bureaus to assist with Innovative Technology projects.

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

ARGEO PAUL CELLUCCI
Governor

TRUDY COXE
Secretary

DAVID B. STRUHS
Commissioner

INNOVATIVE TECHNOLOGY QUESTIONNAIRE

I. Name and Title:

Company:

Address:

Telephone/Facsimile Numbers:

Names and titles of additional people to be involved in discussions with DEP:

II. Information provided here will guide DEP's decisions on project scale and types of approvals. DEP does not want to duplicate review efforts of other authorities if the proposed system is similar to one already in operation. Please describe similar installations, and include location, length of time in operation, scale (bench, field demonstration/pilot, or full-scale operation), capacity, and approvals received from other states, authorities, or countries.

III. DEP needs to understand your expectations of us and your plans for a facility in Massachusetts.

A. Please describe the technology and compare it to competing technologies in terms of capital and operating costs, speed and effectiveness, and position in the pollution prevention hierarchy (prevention, recycling, treatment, disposal).

B. Describe any obstacles to commercial success for this technology.

C. Please provide a project description, including scale and purpose of a Massachusetts facility, types and volumes of materials used and waste produced, qualifications of operators, and siting requirements or site, if known, including sensitive environmental receptors.

D. Please describe your expectations and needs, including time and/or financial constraints.

IV. DEP needs to evaluate actual or expected performance of the proposed system or process in order to adequately protect the environment.

A. If performance data are available, provide a summary. Suggest preliminary performance standards o n which the technology's success or failure will be judged.

B. Has the technology or process been described in a peer-reviewed professional journal? If so, please provide the references.

C. What, if any, ambient environmental factors (e.g. temperature) are likely to affect the system's performance?

D. What are the potential environmental risks from a project or system failure, and how can they be minimized?

E. What is the quantity, fate, and disposal method for any residuals or waste that will be generated?

F. Please provide a flow diagram of the process.

V. Responses to this questionnaire, any other pertinent information, and questions should be submitted to:

If any of this information is proprietary, please speak with your contact at DEP about confidentiality procedures in advance of submitting material to the Department.

SECTION ONE, ATTACHMENT THREE
CONFIDENTIALITY CLAIMS

Reviewers and Review Teams working with innovative technologies can expect to receive questions from IT proponents about making trade secret claims. Several responses are possible:

1. Explain the information in this Fact Sheet.
2. Send the fact sheet to the proponent.
3. Refer the proponent to regional or Boston staff in the Office of General Counsel, if questions arise which are not covered in the Fact Sheet.

Should trade secret claims be received, the Reviewer or Team Lead should review it, with the help of OGC staff if needed, to determine that it complies with the requirements described in the Fact Sheet. The proponent should be contacted if the submission does not comply with requirements for confidentiality.

A confidentiality claim must be held in a secure place by the Reviewer or Team Lead. If someone requests information that is claimed confidential, the Reviewer or Team Lead should consult with regional or Boston OGC staff to determine the appropriate response.

DEP FACT SHEET FOR MAKING CONFIDENTIALITY (TRADE SECRET) CLAIMS

Office of General Counsel, April 1995

I. WHO CAN MAKE A TRADE SECRET CLAIM?

Any person submitting documents or other records as part of the permit process, including a person seeking approval of an innovative technology can request that DEP keep documents or other records confidential if the applicant claims, and can demonstrate, that the documents or records are trade secrets. (310 CMR 3.20, 3.22(1)(c))

II. WHAT IS THE DIFFERENCE BETWEEN A CONFIDENTIALITY CLAIM AND A TRADE SECRET CLAIM?

When anyone requests that documents be kept confidential, he or she must specify why DEP should honor the claim and keep the documents confidential. If something is a trade secret, that is one of the reasons, under 310 CMR 3.00, for keeping it confidential. So, a trade secret claim is a specific type of confidentiality claim. For purposes of this fact sheet, there is no difference between confidentiality claims and trade secret claims, because most IT applicants will be requesting confidentiality on the basis of trade secret.

III. WHAT IS A TRADE SECRET?

310 CMR 3.05 and M.G.L.c. 266, s. 30(4) contain the legal definition of trade secret. In general, a trade secret is information that satisfies the following criteria (310 CMR 3.23):

(1) The information is not widely known, including throughout the company.

(2) The person making the claim takes steps to guard the secrecy of the trade secret.

(3) The information is worth something to the person making the claim, and would also be worth something to that person's competitors.

(4) Some amount of effort went in to developing the trade secret.

(5) The information would be relatively hard for others to acquire or duplicate.

IV. HOW TO MAKE A TRADE SECRET CLAIM

A. Trade secret claims must be in writing. (310 CMR 3.14, 3.24) Each record containing information claimed confidential must be marked "CONFIDENTIAL". When some of the information submitted is claimed confidential and some isn't, the two types of information must be submitted separately. (310 CMR 3.24(1)) Thus, applicants wishing to make a claim of confidentiality will usually submit two sets of material, one with no trade secret information and the other including the trade secret information and accompanied with the request for confidentiality.

B. Trade secret claims must explain why the information in the documents or records meets the definition of a trade secret. This part of the claim should show how each of the criteria listed in Part III above (and, specifically, in 310 CMR 3.23), is met. (310 CMR 3.24, 3.23).

C. Trade secret claims must also contain the following information (310 CMR 3.24):

(i) The time period for which confidential treatment is desired.

(ii) The reason the record was provided to the Department, and the date of submittal.

(iii) The extent to which the person requesting that the record be kept confidential has disclosed the contents of that record to other persons.

(iv) A list of all other Federal, State and local agencies to which the same record or contents thereof has been submitted, which of them have been requested to keep that record confidential, the status of the requests, and a copy of the responses by said agencies or the courts to the requests.

(v) How making the record a public record would harm the person requesting confidentiality and why such harm should be deemed substantial.

(vi) If the record was submitted voluntarily and not in compliance with a regulation or order of the Department or a court, whether and if so why making the record a public record would tend to lessen the availability to the Department of similar records in the future.

V. WHAT HAPPENS IF A CLAIM DOESN'T COMPLY WITH THE REQUIREMENTS IN PART IV WHEN MAKING THE CLAIM?

Many confidentiality claims don't contain all the necessary elements. For instance, many times, claimants simply stamp "confidential" on documents, and don't include a written explanation as to why the information is, in fact, a trade secret. It is important that confidentiality claims comply with 310 CMR

3.00, including providing DEP with the information set forth in Section IV above. Failure to provide the required information could result in disclosure of records, since, without the information, DEP cannot determine that the information is a trade secret. Unless the claimant makes a specific showing that records are entitled to be kept confidential because they qualify as trade secrets, records are presumed to be public. (see 310 CMR 3.12).

VI. WHAT IF SOMEONE REQUESTS INFORMATION CLAIMED CONFIDENTIAL?

When something is claimed confidential, DEP is obligated to honor that claim until the Commissioner determines that it is not a trade secret. (310 CMR 3.14) There are limited exceptions to this; in general, they occur when other environmental laws require that the records must be disclosed, or when disclosure is necessary due to an enforcement action. (310 CMR 3.21)

VII. TRADE SECRET CLAIMS UNDER TURA

The Toxics Use Reduction Act (TURA) contains special provisions for making trade secret claims with respect to information submitted to DEP pursuant to TURA. (For example, TURA requires facilities to submit annual reports, and biennial plan summaries.) In most IT cases, these special provisions will not apply, since IT applicants are not submitting information pursuant to TURA but are submitting information in order to receive some type of permit. However, the special provisions may apply if the IT applicant is also seeking a TURA waiver.

DEP INNOVATIVE TECHNOLOGY GUIDANCE DOCUMENT
SECTION TWO: REVIEW TEAM PROTOCOLS

I. DECIDING TO ASSEMBLE AN INNOVATIVE TECHNOLOGY REVIEW TEAM

Innovative technologies can be reviewed at several levels, depending on their complexity. If an IT proposal is simple and well-developed, a regional reviewer will carry out the process in consultation with other regional staff. A department-wide review team is needed in the following situations:

- Expertise outside the region is needed to review the technology.
- Proposal has been made to Boston office without a regional site, or at sites across regions.
- Potential environmental or public health impacts of the project are unknown or difficult to assess.
- Significant uncertainties exist about the data presented with the proposal or about the data needed to issue a permit.
- Proposal raises significant policy issues or has a statewide impact.
- Project review requires evaluating extensive research on technologies in other areas or on the application of this technology in other situations.
- Review office wants to use a standing group of experts, for example, the DEP Odor Workgroup, Water Pollution Innovative/Alternative Technology Group, Hazardous Waste Incinerator Group.

Two fundamental criteria for a successful review of an IT proposal are:

1. Coordinated, streamlined, careful review, and
2. Good internal and external communication.

A Section or Branch Chief is the key screening mechanism for recommending the need for and structure of a review team. The Regional Director, Assistant Commissioner, or Deputy Commissioner makes the final decision on establishing a review team and is called the case decision maker in the process outlined below. Whenever a Section Chief is uncertain about whether a project is an IT or needs an IT review team, the project should be discussed with the case decision maker.

Attachment One (page 28) is a flow diagram of the process of establishing and managing a review team.

II. ESTABLISHING A REVIEW TEAM

A. Team Formation: the case decision maker forms the review team and designates the team lead, after consultation with senior management in the program, the IT Coordinator, and the permit reviewer.

1. If the case decision maker is a Deputy Commissioner (DC), s/he can create a DEP-wide group after consultation with the other Deputy Commissioners involved.

2. If the case decision maker is an Assistant Commissioner (AC) or Regional Director (RD), s/he must get authorization from her/his DC to establish a group outside her/his own organization, and the DC must follow the same coordination procedure described above.

B. Members of the IT Review Team:

1. The case decision maker must define staff needed on the team, especially if they are outside her/his own organization. A list of the characteristics or needed expertise of each participant may help identify a particular person or backup if the desired person is unavailable. The request for staff should include a resource analysis and adjustment of other projects for key team members.

2. Outside members of the team: if outside professional expertise is needed, an Alternative Schedule Project should be considered to include an payment by the IT proponent for a consultant to report to the DEP.

The DEP will continue to explore mechanisms with other organizations (i.e., universities, EPA, and New England regional organizations) to obtain needed expertise.

3. Public participation: DEP must consider the appropriate mechanism for public participation and for obtaining public comment. The case decision maker may consider the possibility of adding a public member to the team in an advisory role, to represent the various interests of the community and act as a conduit to outside interests. However, this must be carefully considered when there are policy issues of major significance to DEP, and other ways of getting public input should be considered.

4. Resolving disputes on forming a team or selecting team members: if the case decision maker requests a team member from another office, the supervisor of that office should be informed and s/he must analyze workload to ensure adequate time is available. If it is not, agreement must be reached through discussion among the appropriate DCs.

C. Review Team Process:

1. Charge to the IT review team: the case decision maker must determine clearly and briefly what the team is expected to accomplish, and to whom it will report its findings. A project schedule must be identified as part of this charge.

2. Guidance to the Team: a clear description of detailed considerations the group must account for in its deliberations, addressing all major issues. This guidance tool can be referred to and updated as the project progresses to insure that appropriate issues are addressed.

3. Dispute Resolution on technical, legal, or policy matters: Its are often controversial cases and disputes among DEP professionals may occur. The case decision maker resolves most of these disputes. If they cannot be resolved by the case decision maker, a dispute resolution technique should be used to reach a decision. The case decision maker is responsible for using standard DEP dispute resolution techniques such as private meetings, a meeting with the DCs or an "Internal Public Hearing" to accept appropriate input before making a decision.

D. Dissolution of the team: there should be a defined cutoff point (in terms of product deliverable rather than timeframe) when the team should consider that its work is completed. This deadline may need to be updated as the project progresses, but any changes require renegotiation with the DCs, ACs and RDs as appropriate.

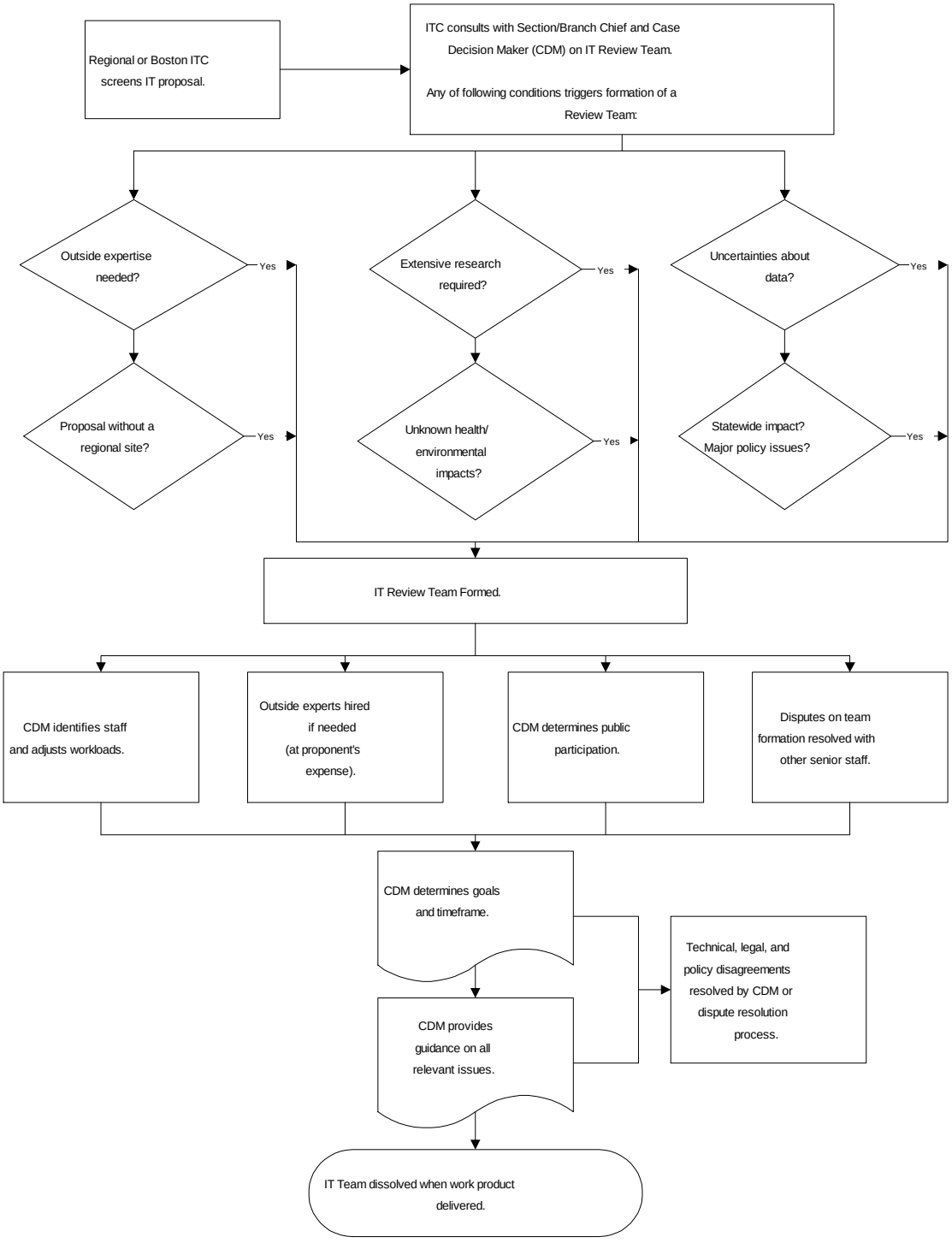
SECTION TWO, ATTACHMENT ONE
FLOW DIAGRAM OF REVIEW TEAM PROTOCOLS

The flow diagram on the following page can be viewed on the computer screen by using the View Document option under Print options (Shift F7, Option 6). It can also be printed, although this maky take considerable time on older printers and does not produce high-quality output.

The Department IT Coordinator will send printed copies of the flow chart to all members of the IT Network; please call if you are not part of the Network and would like a copy.

DEP INNOVATIVE TECHNOLOGY REVIEW

IT Review Team Protocol



DEP INNOVATIVE TECHNOLOGY GUIDANCE DOCUMENT
SECTION THREE: INNOVATIVE TECHNOLOGY CLEARINGHOUSE

The IT Clearinghouse has several purposes:

- Collect and share information on innovative technologies with other DEP staff and other state agencies.
- Inform DEP management of IT successes and failures.
- Establish a database of DEP expertise to provide guidance on future projects.
- Capture data on routine projects which don't have high visibility.

The Clearinghouse is expected to be a network-based system by the end of 1995, and will be maintained by IT staff in Boston. IT Coordinators are responsible for colllecting information on IT projects from staff in their regions or bureaus and submitting the IT Clearinghouse forms, and all staff are encouraged to make sure their Coordinator knows about the IT projects with which they are involved.

Forms should be submitted to Bureau or Department IT Coordinators.

DEP Innovative Technology Clearinghouse Database Entry Form

Bureau:_____ Division:_____ Region: _____
Name of Department Contact or Data Inputter: _____
Phone:_____
Is the technology part of the Strategic Envirotechnology Partnership? _____ (Yes or No)
Transmittal #:_____ Permit #:_____ Tracking #_____

Location of IT Use:
Facility Site:
Contact: _____
Address: _____
City: _____ Zip:_____
Phone #: _____
Firm/Consultant Using IT (if different than facility)
IT User: _____
Contact: _____
Address: _____
City: _____ Zip:_____
Phone #: _____
Developer/Vendor of Technology
IT Vendor:
Contact: _____
Address: _____
City: _____ Zip:_____
Phone #: _____

IT Trade Name:_____
Two Line Description of Technology:
_____
_____
Two Line Description of Regulatory/Permit Status of Technology:

DEP Innovative Technology Clearinghouse Database Entry Form

Please Enter a Full Description (Limited to 1000 characters) of the Technology (Scientific Basis, Cost/Benefits, Proper Application Specifics, etc.). If you like, simply attach brochures, xeroxed portions of proposals, etc.

DEP Innovative Technology Clearinghouse Database Entry Form

Technology Description (please check off boxes that apply)											
Technology Type		**Site Type**		**Media Type**		**Pollutant Type**		**Status**		**Regulatory Assistance**	
Collection System		Commercial		Air		Combustion By-Product		Bench		Regulatory Classification	
Construction Material Technology		Dry Cleaner		Groundwater		Fats, Oil, or Grease		Field Demos		Scoping Session	
Disinfection		Fuel Distributor		Non-Point Source Wastewater		Fuel Hydrocarbons		Pilot		Permit Assistance	
Disposal		Gasoline Station		Sediment		Halogenated Semi-Volatiles		Full-Scale		Final Permit	
Erosion Control		Industrial		Sludge		Halogenated Volatiles		Proposed		Lateral Regulatory Review	
Habitat Restoration		Landfill		Soil		Inorganics/Metals		NULL		Technology Transfer	
Input/Source Substitution/Reduction		Military Facility		Solid Waste		Non-Halogenated Volatiles		Other:		NULL	
Monitoring/Analytic Methods		POTW		Stormwater		Non-Halogenated Semi-Volatiles				Other:	
Non-Native Species Control		Residential		Surface Water		Odors					
Operation Redesign		NULL		Wastewater		PCBs					
Product Redesign, Reformulation, Modification		Other:		NULL		Pesticides					
Remediation, Treatment, Containment				Other:		Residuals/Biosolids					
Reuse, Recycling						Sewage					
Transport of Hazardous Waste						NULL					
NULL (Do Not Know)						Other:					
Other:											

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